

Tidal Wetland Monitoring Project Work Team

Full PWT Meeting Agenda

Date: Tuesday, January 17, 2017

Time: 9am - noon

Location: DWR room 119

3500 Industrial Blvd, West Sacramento, CA 95691

Conference Line: (916) 574-1224

CDFW- Stacy Sherman, Rosie Hartman, Dave Contreras, Ryan Kok, Sunny Lee, Sakura Evans, Alison Furler, Melissa Riley, Hilde Spautz, Dave Zezulak, Rebecca Fris (phone)

DWR – Heather Green, Gardner Jones, Pascale Goertler, Krista Hoffmann, Rhiannon Mulligan (phone), Jamie Suria, Shelly Phillips, Anitra Pawley (phone), Eric Lobochevsky, Randy Mager (phone), Otome Lindsey, (phone), Joy Khamphanh (phone), Rhiannon Mulligan (phone)

USGS – Larry Brown, Fred Feyrer, Oliver Patton

USFWS – Heather Swinney, John DiGregoria

DSP – Maggie Christman, Karen Kayfetz

SFEI – April Robinson

UCD – Jim Hobbs

SFCWA – Kelsey Cowin (phone)

I. Introductions/Housekeeping

- i. Review of meeting notes – October 2016
- ii. Agenda changes?
- iii. Announcement from Erik Loboschewsky – DWR is working with Wim Kimmerer to study flux of zooplankton from duck clubs in Suisun Marsh and needs extra hands for sampling in early February – email him at Erik.Loboschewsky@water.ca.gov if interested.

II. Conceptual Model Update

- o The route to publication as an IEP Technical Report is going well. The authors of the nine chapters have revised the text after comments from the IEP Science Management Team.

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- Rosemary updated the conceptual model figures to be more consistent with one another (i.e. text size, capitalization).
 - The Delta Smelt model figure was not tweaked because it was developed by MAST.
- There were comments to change the figures, but those were declined because the figures had undergone review by the Tidal Wetland PWT team.
- The editors (FRP group) are compiling the chapters into one document, and will submit it for final review by IEP Lead Scientist, Steve Culberson by mid-February.

III. Tidal Wetland Monitoring Framework Update

- The FRP group is looking to have a completed framework by the 2017 IEP workshop.

Recent changes and new figures

- A new figure was added to address what was meant by site, operational landscape unit, Watershed, and estuary scale.
- There were comments on incorporating hydrologic cycles within the framework - added freshwater flows, seasonal variability, spring-neap cycles, and daily tides.
- A tidal map was presented to address the comment of having a general map showing how to estimate tides based on location.
 - Comments - There will need to be caveats to tide map as pulses of water, changes in hydrology caused by restoration, and drawing water can severely affect tidal prediction.
- The data management chapter was updated with recommendations from the IEP Data Utilization Workgroup, including their data life cycle model..

Standard Operating Procedures

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- Many SOPs have been borrowed from other surveys.
- A list of SOPs were presented to the group that included three levels: 1). well drafted SOPs that need review, 2) SOPs that need to be drafted, and 3) SOPs we need assistance in drafting.
- The list of SOPs will be distributed with these notes, contact FRP staff if you are interested in helping draft or review them.
- Comment - for Water Quality SOPs be careful in stating constituent detection limits.

Planning for future versions

- This will be a living document and updated yearly as needed.
- Future updates will include reporting templates and a Quality Assurance Program Plan.

Gear selection results preview; call for fish subgroup

- Oblique and surface trawls were compared in and on the outskirts of Liberty Island.
 - Fish catch and composition were found to be statistically comparable but surface trawls caught more species.
- The lampara net and beach seine were compared in Liberty Island in littoral areas.
 - Fish catch, lengths, and composition were found to be comparable but the lampara caught more species.
- The lampara net and otter trawl were compared in the Lindsey Slough Restoration Area in channel habitat.
 - Fish catch was found to be comparable, however the otter trawl caught a wider range of lengths and more fish species.

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- Dave Contreras will set up a fish subteam meeting to discuss these results in depth and get consensus from the group for gear type recommendation.
- Invertebrate gear types leaf packs and sweep nets were compared in rip rap, submerged vegetation, emergent vegetation, and floating vegetation.
 - Sweep nets had higher variation in catch, but also had higher species richness.
 - No difference in invertebrates was detected between habitat types for leaf packs, but the sweep nets did show difference.
 - Based on the data, sweep nets will be recommended, with leaf packs retained for emergent-vegetation focused work.
- Invertebrate gear types: benthic, oblique, and neuston trawl were compared in open water habitat.
 - The coefficient of variation was high in benthic trawl, while oblique and neuston were similar to one another.
 - There was no difference in species richness between trawls.
 - More snails were collected in benthic trawl, while more cladocera and copepods were collected in oblique trawl.
 - The neuston tow is currently recommended, but the oblique trawl and/or benthic trawl may be recommended based on what is determined by the fish subteam.
- The benthic infauna was compared between the ponar grabs, benthic trawls, and benthic cores.
 - The coefficient of variation was high with oblique trawl.
 - The benthic trawl species richness was higher than other gears.
 - Ponar grabs were similar to EMPs ponar grab samples.

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- Differences between species composition occurred between gear types.
 - Currently recommending benthic cores (shallow water) and ponar grabs (deep water), but want to investigate benthic trawls further
 - Once the report is finished, Rosie will poll the food web subteam to see if they agree with these recommendations, or would like a future meeting to discuss them.
- IV. Ryer Island fish sampling preliminary results (Fred Feyrer, USGS)
- Data was collected from June - October. Gill nets and otter trawls sampled within Ryer Island and outside Ryer Island in channels and shoals.
 - Samples within Ryer Island had higher Chl a, dissolved oxygen, pH, fish species, number of fish, and Shannon Diversity Index but higher variability than the outer channels and shoals.
 - More Splittail and Tule Perch were caught within the island.
 - This work will continue through June.
- V. Introduction of *A Delta Renewed* (April Robinson, SFEI)
- This report is the final in SFEI's Delta Landscapes Project. It focuses on looking at the previous two reports (Delta Historical Ecology and A Delta Transformed) and how this information can be used to inform wetland restoration in the future.
 - The report is not prescriptive in terms of where or how to do restoration, but gives options for what levels of ecosystem function can be attained by restorations of different sizes and locations.
 - SFEI is working with the Delta Conservancy to develop a user's guide to accompany these reports.
- VI. Overview of 2017 IEP Work Plan Directed Studies (Sakura Evans, IEP)

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- 4 New Directed Studies – Estimating abundance of juvenile winter-run Chinook entering /exiting the delta, reconstructing juvenile salmon growth, condition, and habitat use, linking predation mortality to predator density and survival for Chinook Salmon and Steelhead, and enhanced Delta Smelt monitoring.
- If directed studies become ongoing they become baseline long term monitoring study.
- Concept proposals are due March 2018.
- There are quarterly IEP stakeholder meetings and everyone is invited to attend. Dates for 2017: February 8, May 10, August 9, and November 8. All are 1:30-3:30pm DWR West Sacramento rm 119.

VII. Other updates

- Grizzly Slough is flooded.
- McCormick Williamson Tract is not flooded but there is concern it may flood, which would set restoration back a year.

VIII. Next meeting plans

- The PWT decided to meet quarterly rather than every other month. Next meeting will be in April.